

[11] Patent Number:

5,662,930

[45] Date of Patent:

*Sep. 2, 1997

5,030,453 5,041,278 5,077,056 5,213,804	7/1991 ,8/1991 12/1991 5/1993	Lenk et al. 424/450 Janoff et al. 424/1.1 Bally et al. 424/450 Martin et al. 424/450
FOREIGN PATENT DOCUMENTS		
FOREIGN PALENT DOCUMENTS		
0 213 523	3/1987	European Pat. Off A61K 9/50
0 312 212	4/1989	European Pat. Off G01N 33/531
61-088887	5/1986	Japan A61K 3/127
85/00968	3/1985	WIPO A61K 9/22
86/00238	1/1986	WIPO B01D 13/00
86/01102	2/1986	WIPO A61K 9/60
87/00043	1/1987	WIPO A61K 9/00
87/02219	4/1987	WIPO A01N 25/28
88/06443	9/1988	WIPO A61K 9/66
88/09165	5/1989	WIPO A61K 9/50
90/14105	11/1990	WIPO A61K 43/00

OTHER PUBLICATIONS

WIPO A61K 9/127

Bangham, et al., "Diffusion of Univalent Ions across the Lamellae of Swollen Phospholipids", J. Mol. Biol., 13:238-252 (1965).

Deamer and Uster, "Liposome Preparation: Methods and Materials," in: *Liposomes*. Marcel Dekker, Inc., New York (1983) 27-51.

(List continued on next page.)

Primary Examiner—Gollamudi S. Kishore Attorney, Agent, or Firm—Kenneth B. Rubin

[57]

92/05773

4/1992

ABSTRACT

Provided herein is a method of administering a liposome composition to an animal, the method involving administering to the animal a liposome composition containing an adverse physiological reaction-reducing effective amount of a liposome which has, in addition to a bioactive agent, a lipid bilayer containing a lipid and a surface agent-modified molecule. An adverse physiological reaction which may be experienced by the animal upon administration of a liposome composition is reduced by way of the presence of the surface agent-modified molecule in the liposome's lipid bilayer.

17 Claims, 16 Drawing Sheets

